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Patent- och registreringsverket
Valhallavägen 136
P.O. Box 5055
S-102 42 STOCKHOLM
Sweden

Authorized Officer: Tomas Erlandsson
Our ref: BP110563/JVN/SPO

REPLY TO WRITTEN OPINION
INTERNATIONAL PATENT APPLICATION PCT/FI2004/050177
APPLICANT: NOKIA CORPORATION
DUE DATE: 10 October 2005

On account of the Written Opinion issued on 16 March 2005 we submit the following:

In the Written Opinion the claims of the present application are considered to lack an inventive step in the light of the prior art documents D1 (US 6536913) and D2 (JP 20011196638).

Document D1 presents a solution in which light diodes that are vulnerable to electrostatic discharges are surrounded by electrically conductive material. This is accomplished with a part made of electrically conductive material (reference 3 in figure 2) or with an arrangement in which electrically conductive material is induced to a surface of an electrically non-conductive part (reference 4 in figure 2) by vacuum evaporation. The electrically conductive material is able to conduct electrical charges to a ground potential so that high local electrical field strengths that could be able to damage the light emitting diodes can be avoided.

Document D2 presents a solution in which a light emitting diode that is vulnerable to electrostatic discharges and is mounted on a circuit board is protected by a shield made of electrically conductive material. The shield is connected to a ground potential in order to lead electrical charges that could be dangerous to the light emitting diode to the ground potential.

The present application discloses a solution in which electrically conductive material is induced to a surface of a photoconductor so that the electrically conductive material can be electrically connected to a part representing a ground potential, i.e. ground. This arrangement gives the following advantages: 1) no separate electrically conductive component is needed for protecting a light emitting diode/diodes that is/are vulnerable to electrostatic discharges, and 2) the electrically conductive material that is induced to a surface of the photoconductor is impervious to light and, therefore, the means for preventing the light emitted by the diode/diodes from spreading to unwanted places can also be formed by the electrically conductive material. Therefore, no separate components used for limiting the spreading of the light are needed.

Neither of the documents D1 and D2 discloses a solution in which there is a part that consists partly of electrically conductive material and partly of material whose purpose is to conduct light. A combination of the documents D1 and D2 does not lead to a solution in which there is a part that consists partly of electrically conductive material and partly of material whose purpose is to conduct light. In the solutions disclosed by D1 and D2 a light emitting diode is protected by electrically conductive material. The documents D1 and D2 do not, however, teach an arrangement in which electrically conductive material is induced to a surface of a part (photoconductor) whose function is to conduct light.

Therefore, documents D1 and D2 do not constitute an obstacle for novelty and an inventive step for claims of the present application.

BERGGREN OY AB

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Patent Attorney